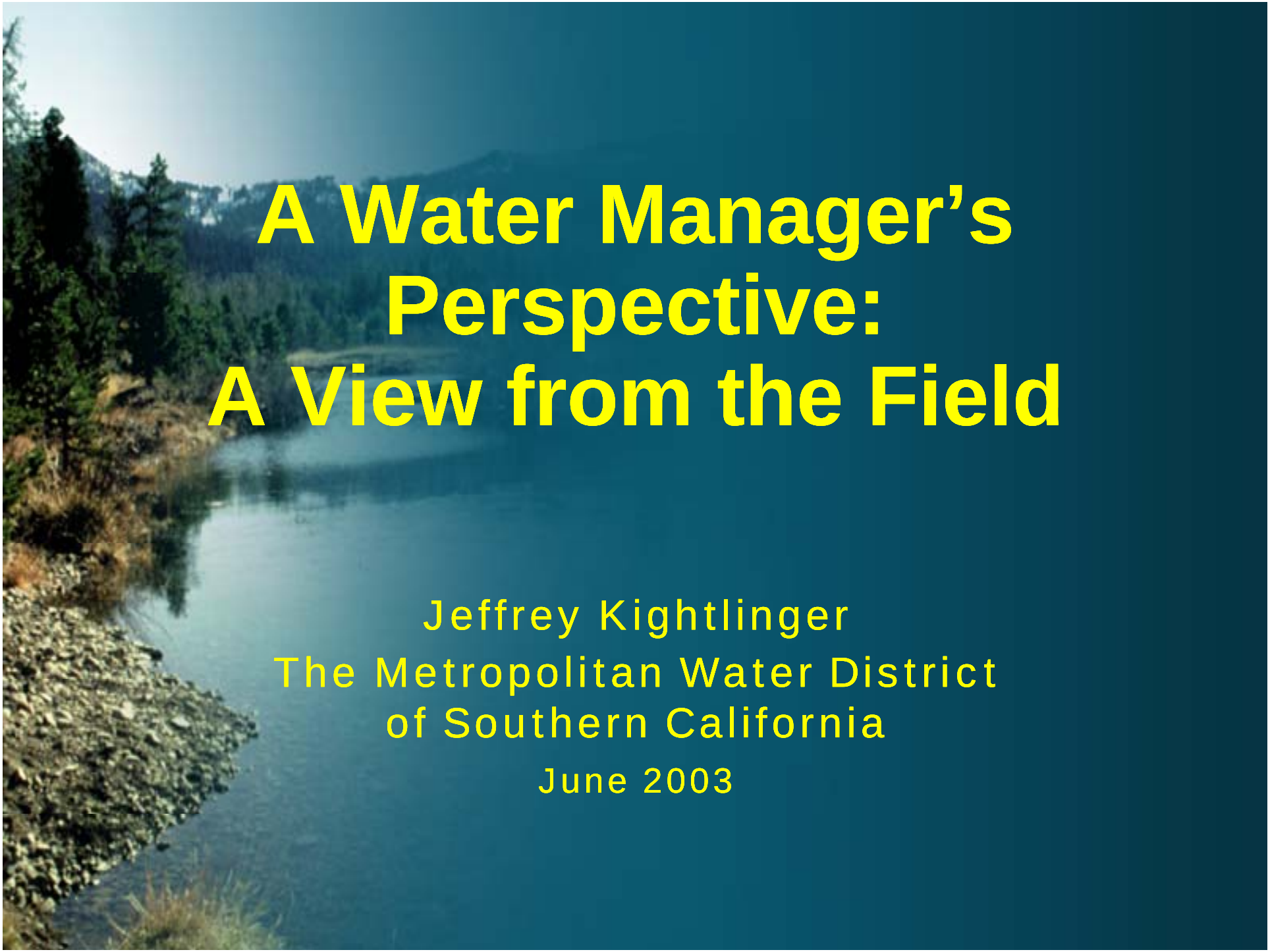
6-13-2003

SLIDES: A Water Manager's Perspective: A View from the Field

Jeffrey Kightlinger



A Water Manager's Perspective: A View from the Field

Jeffrey Kightlinger
The Metropolitan Water District of Southern California

June 2003

Report On Metropolitan's Water Supplies

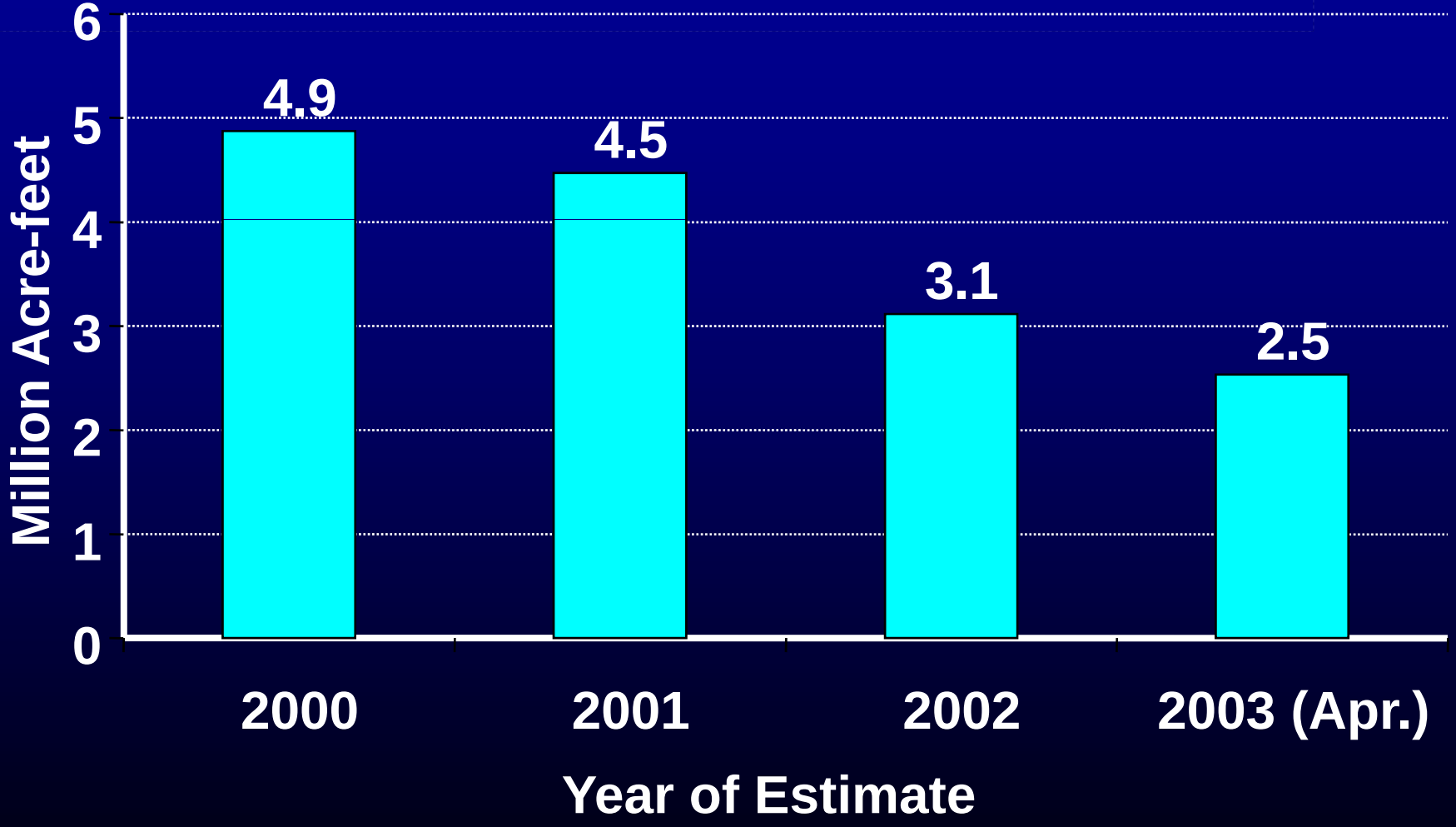
- **Premise**
  - Retail water supply reliability is dependent on the development of both local and supplemental imported water supplies
- **Law (SB221 / SB610)**
  - Require new, large-scale developments to provide substantial evidence of available supplies in the event of drought
- **Objective**
  - Demonstrate a comprehensive plan to provide sufficient supplemental supplies
  - Assist member agencies and local agencies in complying with SB 221 and SB 610

Where Southern California Gets its Water

Changed Conditions for Southern California Resources

- **Challenges**
  - **Reduced Colorado River deliveries**

Total Surplus Available to MWD (with QSA 2004 through 2016)

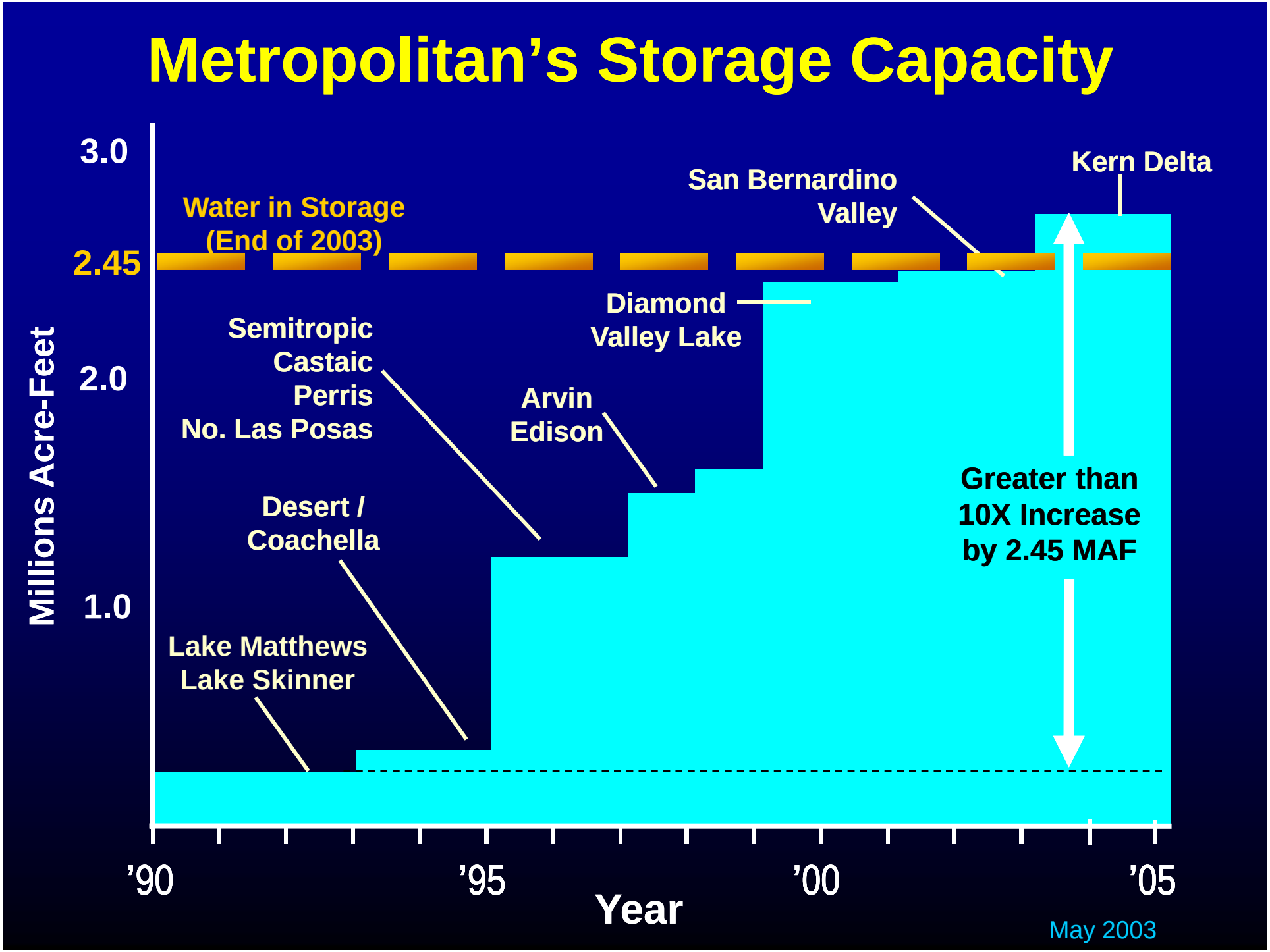


May 2003

Changed Conditions for Southern California Resources

- **Challenges**
  - Reduced Colorado River deliveries
  - Water quality constraints
- **Opportunities**
  - Full Diamond Valley Lake
  - Re-operation of storage and transfers

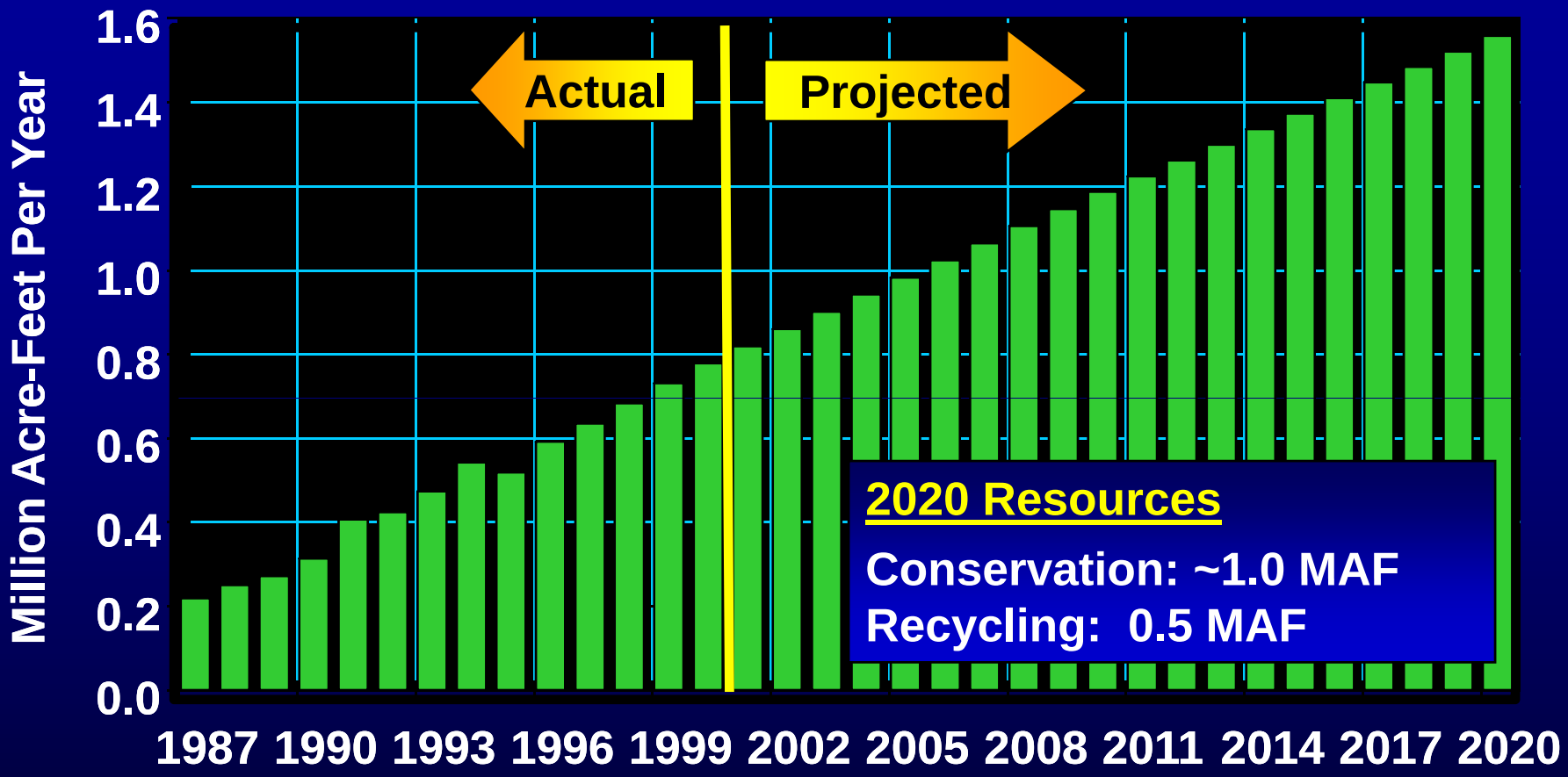
Metropolitan's Storage Capacity



Changed Conditions for Southern California Resources

- **Challenges**
  - Reduced Colorado River deliveries
  - Water quality constraints
- **Opportunities**
  - Full Diamond Valley Lake
  - Re-operation of storage and transfers
  - Enhanced conservation measures
  - Additional local resources

Conservation & Recycling

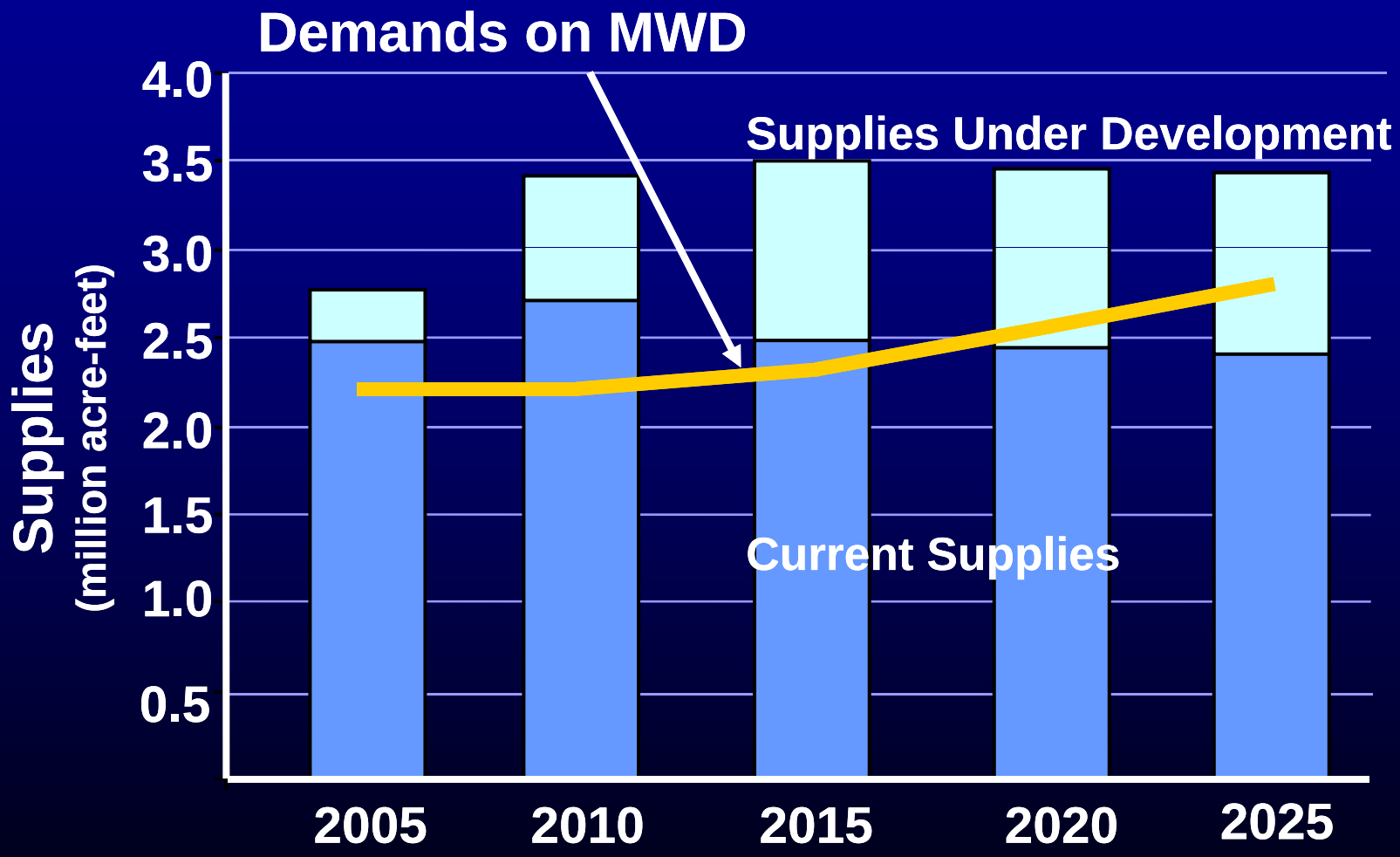


Cumulative Investments:	As of 2000	By 2020
Conservation	$220 mil	$1,300 mil
Recycling	$1,200 mil	$4,100 mil
Total	$1,420 mil	$5,400 mil

Metropolitan's Supply Inventory

- Colorado River Aqueduct Deliveries
- California Aqueduct Deliveries
- In-Basin Storage Deliveries

Multiple Dry-Year Supply Capability & Projected Demands



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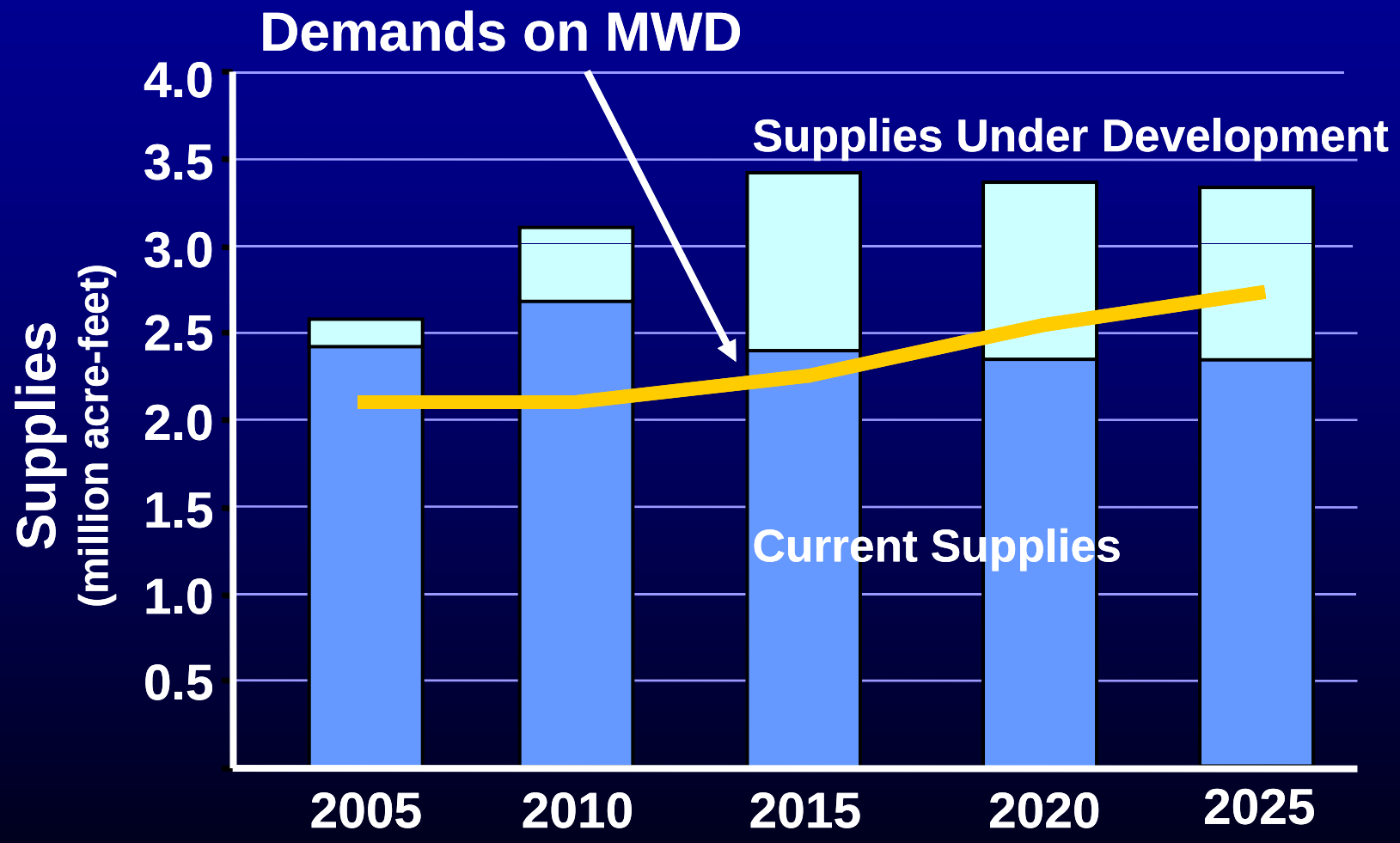
Single Dry-Year Supply Capability & Projected Demands



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Colorado River Aqueduct Deliveries

Current Program Capabilities

- Terms: 2033 to perpetuity
- Storage Capacity = 800 TAF
- Max Dry-Year deliveries:
  - 721 TAF/Yr in 2005
  - 837 TAF/Yr in 2025

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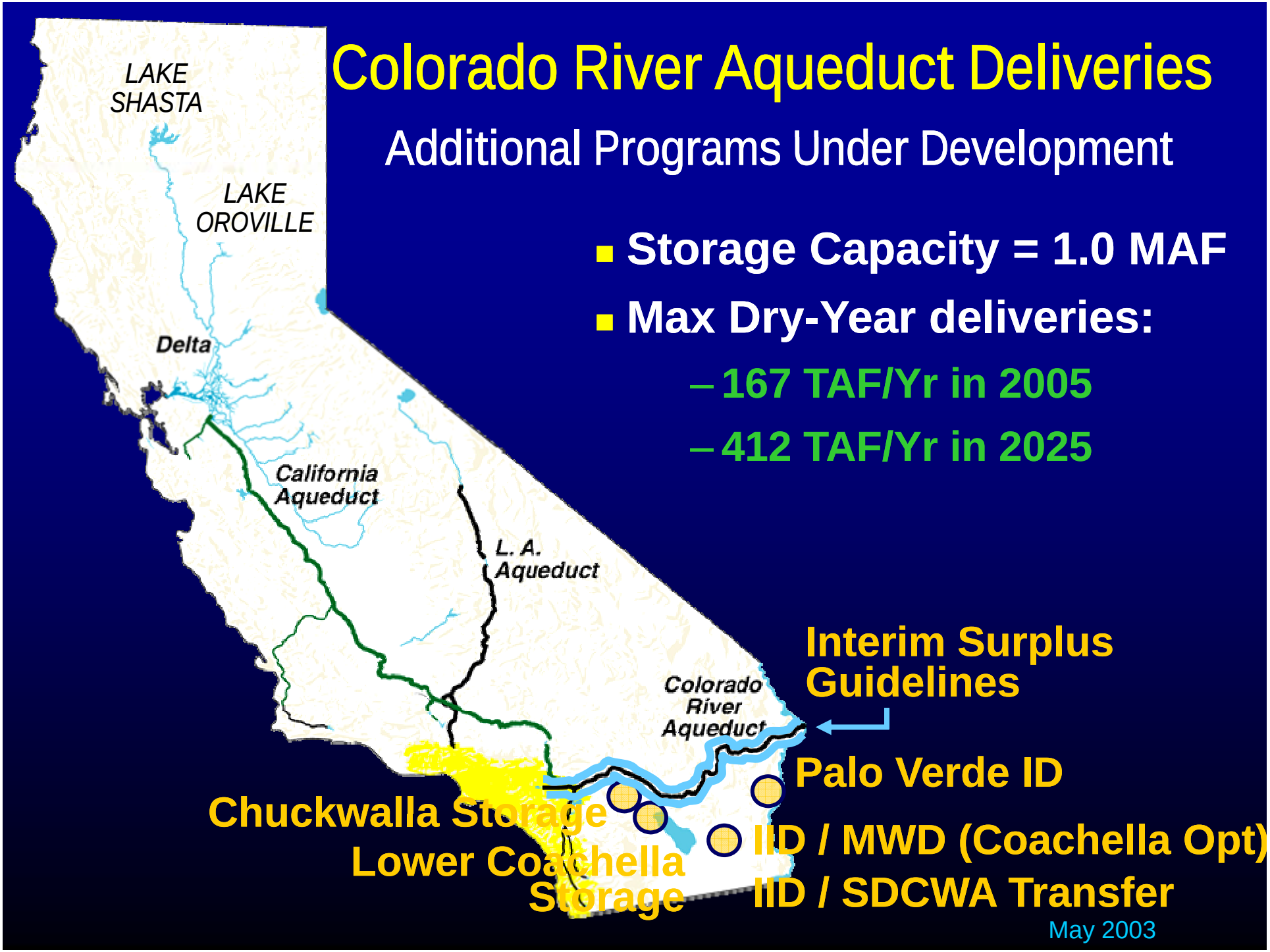
Colorado River Aqueduct Deliveries

Additional Programs Under Development

- **Storage Capacity = 1.0 MAF**
- **Max Dry-Year deliveries:**
  - **167 TAF/Yr in 2005**
  - **412 TAF/Yr in 2025**



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California Aqueduct Deliveries

SWP Entitlement Deliveries

- Contract term: 2035
- Based on historical record
- Deliveries = .418 – 1.741 MAF/Yr

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California Aqueduct Deliveries

Current Banking / Transfer Programs

- Contract terms: 2028 – 2035
- Storage Capacity = 1.1 MAF
- Max Dry-Year deliveries
  = 330 TAF/Yr (10 months)

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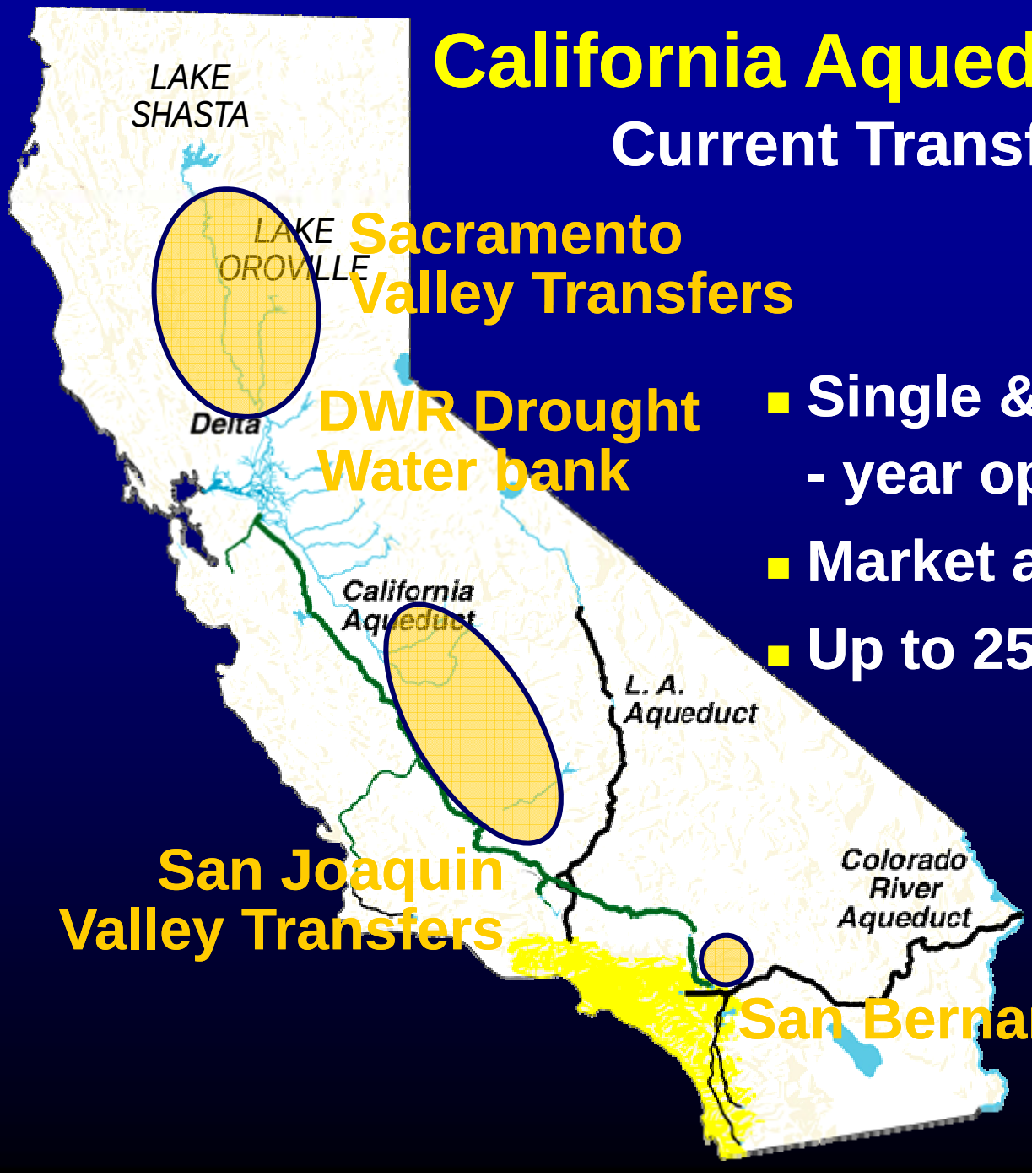
California Aqueduct Deliveries

Current Transfer Options



- Single & multiple - year options
- Market available every year
- Up to 250 TAF in 2003

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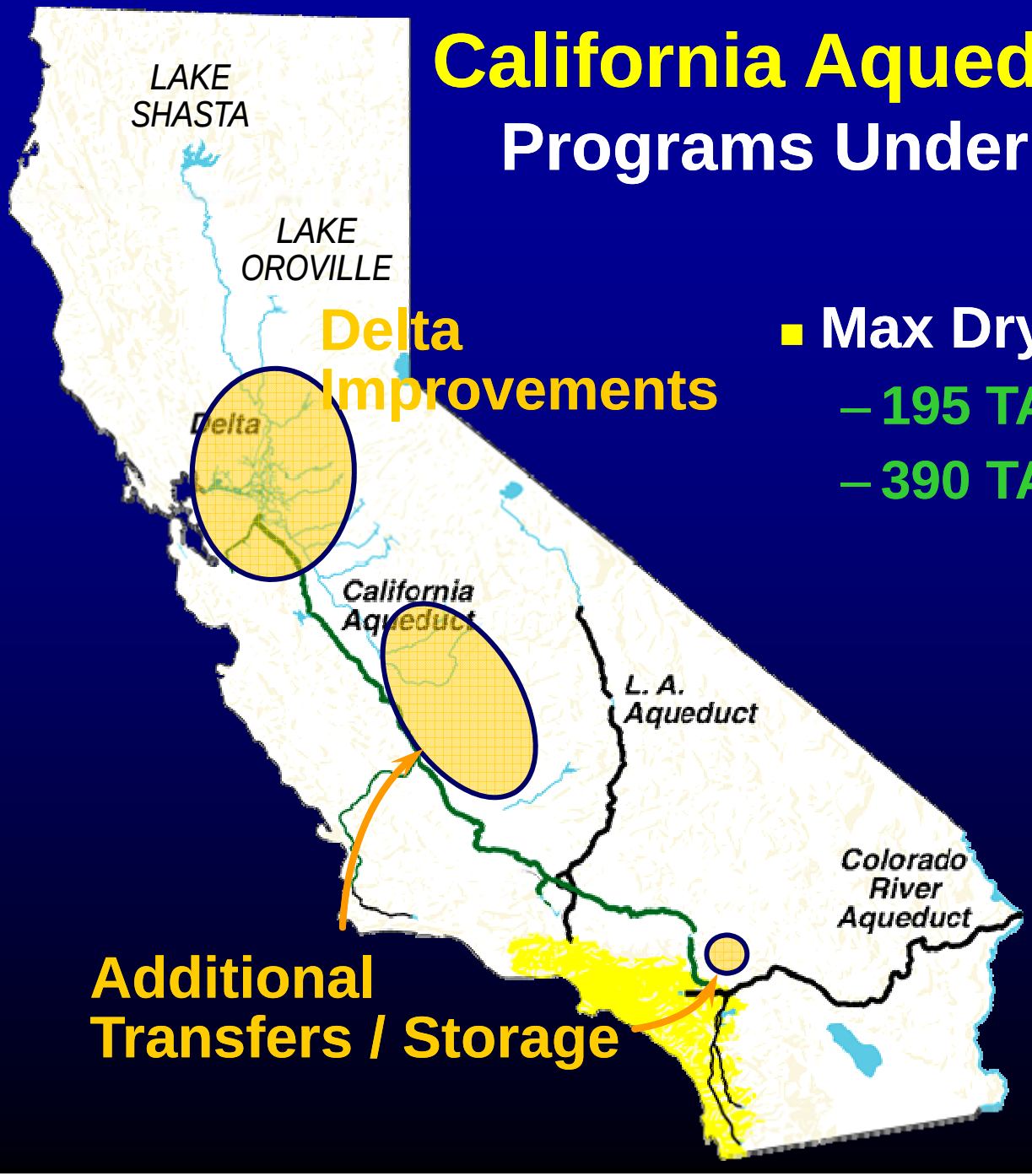
California Aqueduct Deliveries

Programs Under Development



Delta Improvements

- **Max Dry-Year deliveries:**
  - **195 TAF/Yr in 2010**
  - **390 TAF/Yr in 2025**

Additional Transfers / Storage

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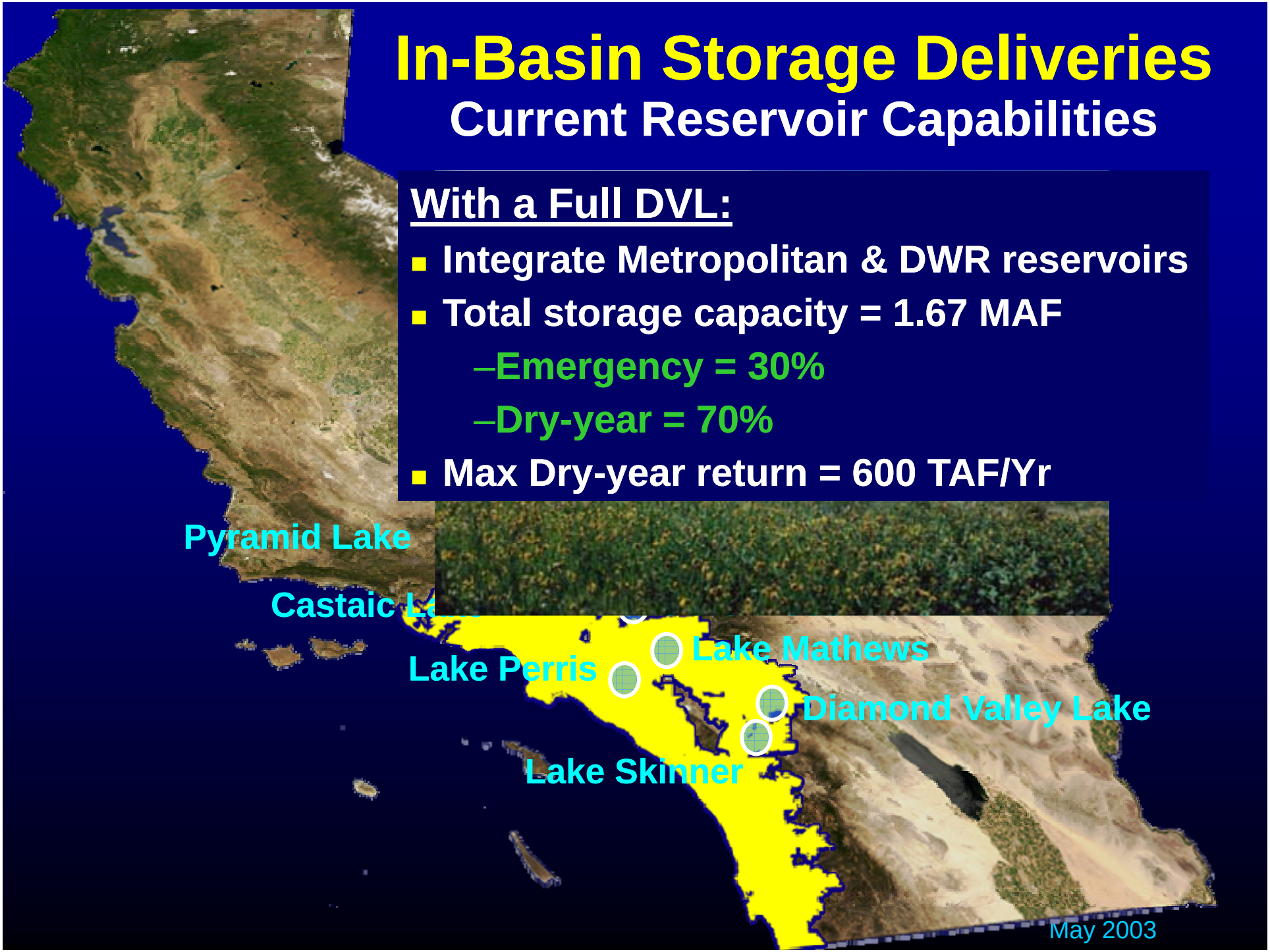
In-Basin Storage Deliveries

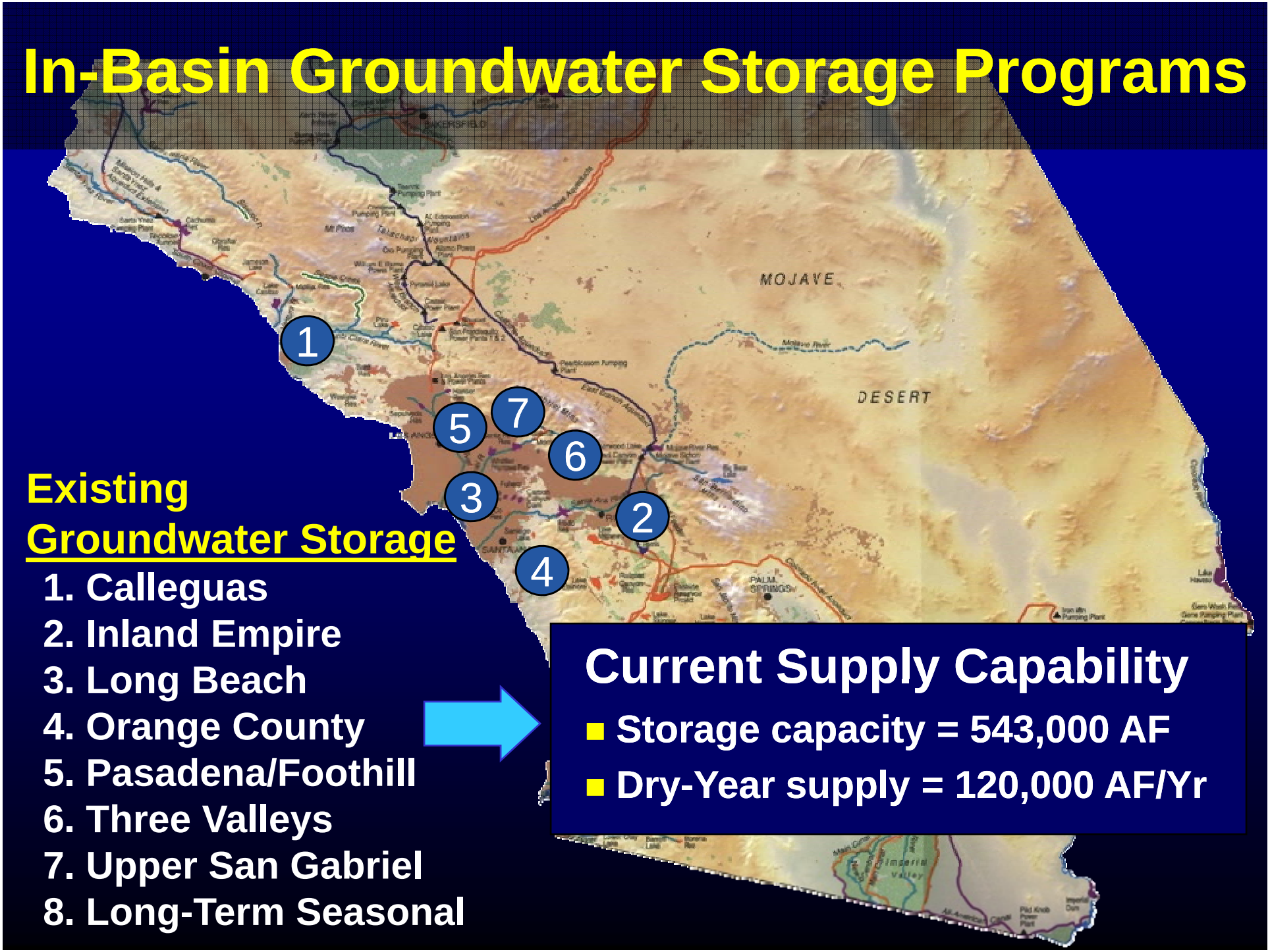
Current Reservoir Capabilities

With a Full DVL:

- Integrate Metropolitan & DWR reservoirs
- Total storage capacity = 1.67 MAF
  - –Emergency = 30%
  - –Dry-year = 70%
- Max Dry-year return = 600 TAF/Yr



In-Basin Groundwater Storage Programs



Existing Groundwater Storage

1. Calleguas
2. Inland Empire
3. Long Beach
4. Orange County
5. Pasadena/Foothill
6. Three Valleys
7. Upper San Gabriel
8. Long-Term Seasonal

Current Supply Capability

- Storage capacity = 543,000 AF
- Dry-Year supply = 120,000 AF/Yr

In-Basin Groundwater Storage Programs

Additional Programs

- Storage capacity = 272,000 AF
- Dry-Year supply = 90,000 AF/Yr

Existing Groundwater Storage

1. Calleguas
2. Inland Empire
3. Long Beach
4. Orange County
5. Pasadena/Foothill
6. Three Valleys
7. Upper San Gabriel
8. Long-Term Seasonal

Additional Prop. 13 Groundwater Storage

9. Inland Empire
10. Foothill
11. Three Valleys
12. San Diego -- Mission
13. Orange County
14. Pasadena/Foothill
15. San Dieguito